**ABSTRACT**
This project is about a circuit that communicates via USB to the PC and via serial to the main board.

A hardware interface was developed to couple the main board to USB.

A Microchip microcontroller has been used to convert serial communication to USB protocols. The code has been made in C language.

To use the PC it was required to develop an USB driver and an User Interface using LabVIEW Software.

**OBJECTIVES**
- Monitor parameters
- Less time downloading parameters into main board
- Have an own system

**BACKGROUND**
Mabe manufactures different models of washers machines. All of the washers use the same main board, with the same software. To differentiate the models the washer parameters are downloaded to the main board.

Also to diagnose the washer, it is required to monitor some of the variables that control the performance of the appliance.

To perform the previous actions they are using a serial to RS232 interface.

**RESULTS**
- Schematic design
- PCB design
- Build circuit prototype
- Communication between main board and microcontroller
- Communication between microcontroller and user interface
- Entire communication

**REFERENCES**
Mabe internal documents.

